REVIEWS

Biographies of Nevada Botanists, 1844–1963. By Olga Reifschneider. 165 pp. University of Nevada Press, Reno. 1964. $4.95.

A little more than a hundred years ago William Henry Brewer wrote from Virginia City that "Nevada Territory embraces over eighty thousand square miles, but is nearly all desert. It has just been made a state, but I see no elements here to make a state. It has mines of marvelous richness but it has nothing else . . . The climate is bad, water bad, land a desert, and the population floating." Nevada, the "land between," the well-nigh country, was more often sampled by the naturalist on the road than as a destination in itself. Nevada's explorers seldom lingered. Exhausted, short of food and funds, wearying of the desert, they were often desperate to reach their Eldorado. For that reason they sometimes passed by some remarkable plants such as the composite *Hecastocleis.* On the other hand that Fremont should stumble upon *Arctomecon,* a papaveraceous genus of restricted range, is a wonder of botanical history. Nevada specimens were often fragmentary and it was not until Sereno Watson threw his energies into the King Expedition that the content of the Nevada flora out of the conestoga tracks came to be known, and even then specimens were sparse by modern standards.

After eight pages of the "physical background" of Nevada and a general account of the history of botanical exploration in the state there begins a chronological album of forty-seven portraits usually with a page or two of biographical matter opposite. About half of the portraits are heretofore unpublished and comprise a notable biohistorical record. A smaller cut would usually have improved the published photograph. Contemporaries will be the historic figures of tomorrow and it is important to record information and portraits of them, a successful facet of the author's book. The source of the portrait, the photographer's name, and the date, are more to be valued than the credit line. The bibliography as it stands is a mixture of technical papers on Nevada botany written by persons included in the book, and biographical accounts of the authors; these two aims should have been divorced with attention given primarily to biographical references. For periodicals pagination as well as volume numbers should have been cited. Separate maps for the collectors, or a map for two or more collectors where their areas of activity will not be easily confused, in the manner of Geiser's *Naturalists of the Frontier,* would have been preferable to the "Botanical collection areas" (p. 17). There is need for a complete index of persons. All of these comments are directed toward the preparation of the second edition which we hope will be forthcoming.

Fred Hebard Hillman introduced his *Early Flora of the Truckee Valley* (1895) by saying it was "issued as a preliminary step toward a future and more complete Flora of Nevada." Comparably Mrs. Reifschneider's album of botanical explorers may be described as a pioneer botanical history of Nevada. *Corrigenda* or *addenda* are arranged in chronological order of the year of the collector's visit to Nevada:

1841. William Gambel (1821–1849), Nuttall's protegé, journeyed across the Virgin River country but doubtfully made any plant collections there. A few of Gambel's specimens are encountered in the British Museum (Natural History) being originally a part of Nuttall's herbarium.

1846. Joseph Burke (fl. 1841–1853) may have collected plants along his route from Fort Hall to Willamette Valley. Historian Dale Morgan of the Bancroft Library will presently publish additional information on Burke.

1854. James Aitken Snyder (d. 1900) assisted Lt. E. G. Beckwith in the exploration of the western Great Basin. Lt. Beckwith assumed command of Gunnison's Expedition after the massacre of Capt. Gunnison in October, 1853. Beckwith listed Snyder's collections in the second volume of the Pacific Railway Reports. These Snyder specimens have been cited frequently as Beckwith's (for example, King Report, pp. 36 and 109). Susan G. Stokes, *Genus Eriogonum,* p. 43, 1936, credits the type of *Eriogonum nutans* T.&G. as being Beckwith's specimen though it was

more accurately Snyder's. Snyder's field localities are few: Agate Pass of the Quartz Mountains (*Pac. R.R. Rep.* 2:121) and "Nevada: canyon at the eastern base of the Sierra Nevada," the type locality for *Eriogonum nutans*. Snyder collected *Dodecatheon integrifolium* and the type of *Viola beckwithii* "in a canyon between Great Salt Lake and the Sierra Nevada"! but Viola Brainerd Baird, in *Wild Violets of North America,* p. 212, 1942, fixes the locality as "Diamond Mt., Eureka Co., Nevada, 1854, *Snyder.*" The well known botanical roster in volume two of the *Botany of California* (1880) mentions *Dr.* J. A. Snyder but J. H. Barnhart doubts the appellation "Dr."

1885. Ezechiel Jules Remy (1826–1893), French natural history collector, travelled from San Francisco to Salt Lake City in the company of Julius Lucius Brenchley, ornithological collector and author, and recorded his impressions of Nevada in chapters one and two of his *Journey to Great-Salt-Lake-City* (London, 1861). Remy took a particular interest in the genus *Eriogonum* and his specimens, never numerous, are in the Natural History Museum, Paris.

186_? Hiram G. Bloomer (1821–1874) is frequently mentioned in the King Report (pp. 27, 140, 153, 166, etc.). His collections made about Mr. Davidson, Steamboat Springs, Washoe Valley, Cedar Hill, and Virginia City, and preserved in the California Academy were mostly lost in the San Francisco fire of 1906.

186_? C. Herbert Dorr collected the type of *Audibertia dorrii* named by Albert Kellogg in 1863 and presumably taken near Virginia City, but the specimen is lost. The King Report (p. 44) refers to Dorr's collection of *Spraguea paniculata* from the western base of Mt. Davidson. Was he related to Sullivan Dorr (1778-1858) of Boston and Providence? Papers of the Dorr family are preserved at the Essex Institute, Salem, Mass.

1862. Charles Lewis Anderson. W. H. Brewer and C. L. Anderson are mistakenly cited in Mrs. Reifschneider's bibliography as the authors of Asa Gray's paper on Anderson's and Brewer's collections. Interesting biographical facts on Dr. Anderson will be found in "The History of Botanical Collecting in the Santa Cruz Mountains of central California" by J. H. Thomas (*Contr. Dudley Herb.* 5:147–148. 1961).

1863. William Henry Brewer (1828–1910) collected on the Truckee River, at Aurora, and in the Esmeralda district, and in 1864 about Virginia City. Farquhar published an interesting letter from this period of Brewer's life in *Up and Down California,* pp. 551–559. 1930.

1863–64. John Allen Veatch (1808–1870), mining engineer, associate of Dr. Albert Kellogg, and active in the early years of the California Academy, was a resident of Virginia City in 1863–64 where he was evidently engaged in medical practice (as well as mining activities) while his son Andrew Allen Veatch was superintendent of the reduction works of the central mill. The King Report (p. 133) cites a Veatch collection from the Washoe Mts.

1865. John Torrey (1796–1873) collected at Carson City, Washoe Lake (his no. *123*), and about Steamboat Springs, Washoe Valley (no. *372*), as cited in the King Report. This visit of 1865 was a stopover on a confidential mission to California as an assayer for the Treasury Department.

1866. John Gill Lemmon (1832–1908) is said (p. 39) to have sent 50 plant specimens to Henry N. Bolander, "the only botanist on the Pacific Coast at that time." Lemmon was himself the source of that erroneous statement, which certainly disregarded Dr. Kellogg at the Academy! Here we encounter the gentle rivalry that existed between Kellogg and Asa Gray for the description of novelties that were being discovered every year, and Lemmon's allegiance to Gray. The history of the portrait of Lemmon, whose middle name was Gill not Gibbs, is interestingly told in *Madroño* 5:77. 1939, where it was first published.

1867. William More Gabb (1839–1878), paleontologist, geologist, assistant to J. D. Whitney on the California State Geological Survey, collected insects as well as plants. Gabb is mentioned in the King Report as having collected on the "sage plains of western Nevada" (p. 117), south of Walker's Lake (p. 118), and along the

state boundary. For references to Gabb and others in this list see my roster in the *Century of Progress in the Natural Sciences,* 1853–1953, p. 49. 1955.

1867. William Whiman Bailey (1843–1914), son of Jacob Whitman Bailey, was the first botanist of the King Expedition; he was evidently not a Doctor of Medicine as cited by Reifschneider (p. 47). "Entering Nevada from California," wrote Sereno Watson in the *Botany of the Fortieth Parallel,* xxii, 1871, "collection was commenced on the 16th of July, 1867, in the valley of the Truckee River by Mr. W. W. Bailey, botanist of the expedition, and was continued through the season but confined wholly to the district between the Virginia and the Pah-Ute Mountains. The summer was already so far advanced that the earlier vegetation had disappeared and little was left to reward the collector. Some gleanings were however made, especially in the West Humboldt Mountains [type of *Ivesia baileyi* was taken in Wright's Canyon, 7,000 ft., in Sept., no. 346] and in the bottoms and sinks of the Truckee, Carson, and Humboldt Rivers." Bailey's health continued to decline during the winter of 1867 and Watson succeeded him in the spring of 1868.

1868–69. Richard Harper Stretch (1837–1923), entomologist, is mentioned several times in the King Report (pp. 13, 63, 98, 177, 216, etc.) as having botanized at Carson City and Washoe Valley. He spent the winter of 1868–69 studying the Comstock Lode for the U.S. Geological Survey. Stretch named the Nevada buckmoth *(Hemileuca nevadensis),* moths being his particular interest.

1877. When Joseph Dalton Hooker toured the West with Asa Gray by rail they "left the direct route at Reno," wrote Gray to Engelmann, "went to Carson City, with detour to Virginia City, —queer place; first got hold of *Pinus monophylla,* but there no fruit. Hired conveyance to take us from Carson right across the Sierra Nevada via Silver Mt. to Calaveras Big Trees." (J. L. Gray, *Letters of Asa Gray,* 2:674. 1893).

1878. Charles Frederick Sonne. Portrait published in *Madroño* 2:115. 1934.

1880. William Hillman Shockley (1855–1925), mining engineer, who as partner in the firm of Zabriskie and Shockley, lived in Candelaria, Nevada, from 1880 to 1893, botanized "on the side" in Esmeralda County and the White Mts. He took the type of *Lupinus shockleyi* at Soda Springs and discovered two composites, *Acamptopappus shockleyi* Gray, and the endemic monotypic mutisiaceous genus *Hecastocleis* Gray. In 1878 Shockley was collecting ferns for D. C. Eaton in the limestone sinks of Florida. Jepson published a biographical sketch and portrait in *Madroño* (2:26–28. 1931).

1890. Vernon (Orlando) Bailey (1864–1942), biologist, started his career with the Death Valley Expedition. On May 1st, 1890, Bailey collected two new species, *Abronia orbiculata* Standl. and *Arctomecon merriami* Cov. between Cotttonwood Springs and Las Vegas Ranch.

1898. Carl Albert Purpus (1853–1941), one of a triumvirate of Mexican botanical explorers—Palmer, Pringle, and Purpus—, crossed the Charleston Mountains from Pahrump Ranch to Indian Springs, visiting Clark Canyon on the way, and collecting the types of *Arabis pendulina* Greene and *Frasera induta* Tidestr.

1927. Charles Leo Htchcock (1902–) botanized in the Charleston Mountains where he took the type of *Lesquerella hitchcockii* Munz and *Erigeron uncialis* var. *conjugens* Blake. He returned to botanize in the Charleston Mountains with George Jones Goodman (1904–) in July, 1930.—Joseph Ewan, Tulane University, New Orleans.